



Columbia Fire Department

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Removal Date: RETAIN

Memo: 08-006R

To: All Suppression Career and Volunteer Personnel
From: Harry H. Tinsley, Assistant Chief of Operations
Date: 19 May 2008
Re: Annual Fire Hose Testing Procedures

From NFPA 1962, *Care, Use and Services Testing of Fire Hose Including Couplings and Nozzles*

- **Annual Hose Testing is to be started the Monday of the week of April 15 each calendar year.**
- **All hose is to be tested and records sent to Logistics by May 31, 2008.**
- **We ask that all members help each other to complete this task and coordinate accordingly.**

Danger! Testing fire hose under pressure is a dangerous task and safety precautions should be followed.

Equipment needed:

- Fire apparatus with adequate pump and outlets for testing hose.
- One or more hose test valves made from a gate valve for the size coupling of the hose to be tested.
- A nozzle with a non-twist shut off valve for each hose size to be tested.
- Large black permanent marker
- Record form to record information (attached below)
- **All personnel within the span of the hose being tested are to wear at the minimum, helmet, gloves and eye protection. Furthermore, the pump panel and each nozzle are to be manned at all time during hose being pressurized.**

1. Visually inspect hose and divide into three categories:

A. Hose to be tested B. Hose to be repaired C. Condemned Hose
Hose to be repaired is tested differently and should be separated (see below). Condemned hose is to be cleaned and dried then set aside with a knot tied in it at the coupling. Furthermore, hose found with holes in them during testing should be marked with a string noting the location of the hole in addition to the knot at the coupling. At the end of the testing period these hose will be sent to Logistics.

2. Hose should have an identification number of some type.

Hose can be identified by using a number that can be provided by Logistics. Hoses are to be marked on both ends with this number. Please coordinate with the other station Officers when a number is needed for un-marked hose or sending damaged hose to Logistics. In these circumstances, set these hose aside and make one call at the end of the testing period.

3. Determine Pressure for Hose to be tested:

- 1 1/2" and 2 1/2" **single jacket hose** should not be used for structural fire fighting therefore is not tested in this procedure.
- Hose is to be tested at 250 psi for 5 minutes.
- Pumper supply (soft suction) 4" – 6" multiple jacket hose should be tested at 200 psi for 5 minutes.
- Separate hose based on required test pressure. Connect hoses of the same pressure test in sections **no longer than 300 feet** in a straight line without kinks.

4. Set up the hose.

Attach the test gate valve(s) to the apparatus at the appropriate discharge point. Attach the hose section(s) to the gate valve and attach the nozzle to the end of the hose. Secure the hose closest to the test gate valve to the discharge with the strap or rope. Mark behind each coupling with the permanent marker completely around the hose as close as possible to the coupling to help determine slippage once the test is completed.

Open the test gate valve. Close the nozzle on the end of the hose. Raise the pump pressure in the discharge to 45 psi. Raise the end of the hose above the level of the test gate valve and slowly open the nozzle to allow all air to leave the line. Once all of the air is evacuated from the hose line, close the nozzle or bleeder valve, and then close the test gate valve at the pump discharge. Secure the nozzle end of the hose to prevent the hose from whipping should a rupture occur.

Check all couplings for leakage and tighten as necessary.

5. Pressurize the hose.

All personnel should be cleared from the area. Keep the test gate valve closed. The pressure should be brought up slowly on the sections of hose to be tested to the appropriate test pressure and held for 5 minutes. If there is a severe leak or hose rupture, stop the test, replace the defective hose and start over.

The hose should be inspected by walking down the left side of the hose (away from the pump towards the nozzle) approximately 15 feet away from hose while it is under test pressure. (The hose will roll to the right should a rupture occur). This will provide for additional safety. Never straddle the hose or move the hose once it is under test pressure.

Once the time is completed, slowly shut down the pump, close the pump discharge gates and open the nozzle or bleeder test cap. Allow the water to drain and inspect the hose couplings for any slippage. Any slippage (more than 1/2 inch) found should be identified and the hose taken out of service for repair.

6. Record the test results.

Record the test results on the attached form. The test should be conducted annually. Records should be maintained at each fire Station and Logistics for all hose.

The Office of the Division Chiefs will submit a report by June 1, to the Assistant Chief of Operations indicating all fire hose testing for career and volunteer stations has been completed.

7. Repaired hose

All damaged fire hose or hose needing repair must be cleaned, dried, tagged (*indicating the problem and a mark identifying the damaged location*), and rolled and then sent to Logistics for repairs. Please do not send dirty/wet fire hose to Logistics for repair. Hose that has been repaired should be tested one length at a time.

8. Testing Reserve Apparatus

When a hose on a reserve truck is tested, please attach a visible note in the cab stating so. This is to guard against a receiving station repeating efforts.

At the end of the testing procedure for each station, the completed forms are to be emailed to cfdfoster@columbiasc.net and cfdcsmith@columbiasc.net. Two hard copies are to also be generated and filed as follows; one in the station Officer's file and one in the station's file. Records are to be kept at each station for 5 consecutive years.

